

AMENDMENT OF THE CLAIMS

1. -17. (Cancelled)
18. (Currently Amended) A method for reducing power consumption by multiple links communicatively interconnected to provide a path between an origin and a destination [[of]]for a data transmission, wherein each of the multiple links comprise a transmitter communicatively coupled with a receiver via a data transmission medium, the method comprising:
- determining an activity for the multiple links based upon forwarding logic, the activity being related to a characteristic for the data transmission via a channel of the multiple links;
- associating the activity with a power mode for the multiple links, wherein the power mode is related to the characteristic; and
- communicating the power mode to the multiple links to configure circuitry associated with the multiple links to process the data transmission.
19. (Previously Presented) The method of claim 18, wherein determining comprises selecting a medium for at least one of the channels.
20. (Previously Presented) The method of claim 18, wherein determining comprises determining that the multiple links are inactive.
21. (Previously Presented) The method of claim 18, wherein associating comprises associating the transmission frequency with a configuration of the circuitry.
22. (Previously Presented) The method of claim 18, wherein communicating comprises communicating the power mode to substitute a clock and data recovery loop with a less complex, clock and data recovery loop associated with a lower power consumption.

23. (Previously Presented) The method of claim 18, wherein communicating comprises communicating the power mode to reduce a gain of a bias circuit.
24. (Previously Presented) The method of claim 18, wherein communicating comprises communicating the power mode to reduce a frequency of a serialization circuit.
25. (Currently Amended) An apparatus(140) to ~~process~~retransmit a data transmission between a first device(130) and a second device(170) via ~~[[an]]~~ intermediate links, the apparatus(140) comprising:
- a first port(150) to communicatively couple with a transmitter(134) of the first device(130) via a first data transmission medium to form a first intermediate link, the first port(150) comprising a first link circuit(154) to couple to the first data transmission medium, first device to process~~receive~~ the data transmission ~~[[for]]~~from the first device(130), and a first local link control(152) responsive to a control signal ~~received by the apparatus~~ from a global link control(116) of another apparatus(110) to configure the first link circuit(154) to operate in a first power mode of multiple power modes associated with the first link circuit(154) based upon ~~the control signal, wherein the control signal is associated with~~ at least one characteristic of the data transmission ~~and the first power mode is associated with the at least one characteristic; and~~
- a second port(160) to communicatively couple with a receiver of the second device(170) via a second data transmission medium to form a second intermediate link and with the first port(150) to retransmit the data transmission, the second port(160) comprising a second link circuit(164) to couple to the second data transmission medium, second device to process~~transmit~~ the data transmission ~~[[for]]~~to the second device(170), and a second local link control(162) responsive to the control signal from the global link control(116) to configure the second link circuit(164) to operate in a second power mode of multiple power modes associated with the second link circuit(164), ~~wherein the second power mode is associated with~~ based upon the at least one characteristic of the data transmission.

26. (Previously Presented) The apparatus of claim 25, wherein the first link circuit comprises a clock and data recovery loop, wherein an ability of the clock and data recovery loop to track changes in a phase of the data transmission varies between the first power mode and other of the multiple power modes associated with the first link circuit.
27. (Previously Presented) The apparatus of claim 25, wherein the first link circuit comprises circuitry that is configurable to adjust amplification of the data transmission.
28. (Previously Presented) The apparatus of claim 25, wherein the first link circuit comprises a gain and equalization circuit being configurable via the first local link control in response to the control signal to compensate for attenuation and distortion based upon a medium associated with the data transmission.
29. (Previously Presented) The apparatus of claim 31, wherein first local link control comprises interpretation logic to reconfigure the first link circuit in response to the control signal, wherein the control signal is related to a traffic type associated with the data transmission.
30. (Previously Presented) The apparatus of claim 25, wherein the first local link control comprises interpretation logic to adjust an operating voltage and frequency for the first link circuit in response to an indication by the control signal of a data frequency for the data transmission.
31. (Previously Presented) The apparatus of claim 25, wherein the second link circuit comprises a serialization circuit that is configurable via the second local link control to process the data transmission in accordance with a data frequency indicated by the control signal.
32. (Previously Presented) The apparatus of claim 25, wherein the second link circuit comprises a pre-emphasis circuit that is configurable via the second local link control in response to the control signal.

33. (Previously Presented) The apparatus of claim 25, wherein the second local link control is to reconfigure the second link circuit in response to the control signal, wherein the control signal is indicative of a length of a medium for the data transmission.
34. (Previously Presented) The apparatus of claim 25, wherein the second local link control comprises interpretation logic to select the second link circuit and the second power mode for the second link circuit based upon the control signal.
35. (Previously Presented) The apparatus of claim 34, wherein the interpretation logic comprises a table to associate the second power mode with a data frequency, wherein the control signal indicates the data frequency.
36. (Currently Amended) An apparatus(110), comprising:
forwarding logic to associate ports(120,130,150,160) with multiple links between an origin(105) and a destination(170) for a data transmission to transmit the data transmission via the multiple links to the destination, each of the multiple links to comprise a first port(130) with a transmitter(134) communicatively coupled with a receiver(154) of a second port(150) via a data transmission medium; and
a global link control(116) coupled with the forwarding logic to transmit a control signal to the ports(120,130,150,160), the control signal being indicative of at least one characteristic of the data transmission, to configure link circuits(124,134,154,164) of the ports(120,130,150,160) based upon the at least one characteristic via local link controls(122,132,152,162) of the ports(120,130,150,160).
37. (Previously Presented) The apparatus of claim 36, further comprising a local link control, responsive to the control signal, to configure the circuitry associated with at least one of the multiple links to operate in a power mode associated with the control signal.
38. (Previously Presented) The apparatus of claim 37, wherein the local link control comprises part of a receiver and is designed to adjust power consumption by the at least one of the multiple links by selecting the power mode, wherein the power mode maintains a data throughput.

39. (Previously Presented) The apparatus of claim 37, wherein the local link control comprises part of a transmitter, the transmitter being adapted to deactivate a gain and equalization circuit based upon the control signal.
40. (Previously Presented) The apparatus of claim 37, wherein the local link control is adapted to change an operating frequency and an operating voltage for the circuitry based upon the control signal.
41. (Previously Presented) The apparatus of claim 36, wherein the global link control is designed to communicate a routing decision of a router for the ports of the multiple links in the control signal to the local link controls of the multiple links, wherein the routing decision determines a data frequency, a traffic type, and a medium type for the data transmission, to configure the ports in accordance with the routing decision.